IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A membrane ~~based on~~ comprising a polymeric nonwoven, said nonwoven comprising on and in said nonwoven a ceramic coating which comprises at least one oxide selected from the group consisting of Al_2O_3, TiO_2, ZrO_2 [[or]] and SiO_2, ~~characterized in that~~

wherein ~~this one~~ said ceramic coating comprises at least two fractions of oxides selected from the group consisting of Al_2O_3, ZrO_2, TiO_2 ~~and/or~~ and SiO_2, [[the]] a first ceramic fraction having been obtained from a sol and ~~the~~ a second fraction comprising particles having an average particle size in the range from 200 nm to 5 μm and the first fraction being present as a layer on the particles of said second fraction and said first fraction comprising from 1 to 30 parts by mass of said coating, said second fraction comprising from 5 to 94 parts by mass of the ceramic coating and also a silicon network, the silicon of said network being bonded via oxygen atoms to said oxides of said ceramic coating, via organic radicals to said polymeric nonwoven and via at least one carbon chain to a further silicon.

Claim 2 (Currently Amended): A membrane ~~according to claim 1,characterized in thatit is~~ obtained by a process as ~~per at least one of claims 14 to 26~~ claimed in claim 14.

Claim 3 (Currently Amended): [[A]] The membrane as ~~per claim 1 or 2~~ claimed in claim 1, wherein ~~characterized in that~~ said first ceramic fraction comprises particles having an average particle size of less than 20 nm and has been prepared via a particulate sol.

Claim 4 (Currently Amended): [[A]] The membrane as ~~per claim 1 or 2~~ claimed in claim 1, wherein ~~characterized in that~~ said first ceramic fraction contains particles or an inorganic network of the ceramic material which were prepared via a polymeric sol.

Claim 5 (Currently Amended): [[A]] The membrane as ~~per at least one of claim 1 to 4~~ claimed in claim 1, wherein ~~characterized in that~~ said first ceramic fraction has a layer thickness of less than 100 nm on said particles of said second fraction.

Claim 6 (Currently Amended): [[A]] The membrane ~~according to at least one of claim 1 to 5~~ as claimed in claim 1, wherein ~~characterized in that~~ said second particle fraction contains particles having a BET surface area of less than 5 m^2/g.

Claim 7 (Currently Amended): [[A]] The membrane ~~according to at least one of claims 1 to 6~~ as claimed in claim 1, wherein ~~characterized in that~~ said polymeric nonwoven comprises polymeric fibers selected from fibers of polyethylene, polyacrylonitrile, polypropylene, polyamide and/or polyester.

Claim 8 (Currently Amended): [[A]] The membrane as ~~per at least one of claim 1 to 7~~ claimed in claim 1, wherein ~~characterized in that~~ said coating comprises at least three fractions of oxides selected from the group consisting of Al_2O_3, ZrO_2, TiO_2 ~~and/or~~ and SiO_2, a third fraction comprising particles having an average primary particle size in the range from 10 nm to 199 nm and said first fraction being present as a layer on said particles of said second and third fractions and said first fraction comprising from 1 to 30 parts by mass of said ceramic coating, said second fraction comprising from 30 to 94 parts by mass of said

ceramic coating and said third fraction comprising from 5 to 50 parts by mass of said ceramic coating.

Claim 9 (Currently Amended): [[A]] The membrane as ~~per claim 8~~ as claimed in claim 8, wherein ~~characterized in that~~ said third particle fraction contains particles having a BET surface area in the range from 10 to 1 000 m^2/g.

Claim 10 (Currently Amended): [[A]] The membrane as ~~per claim 8 or 9~~ claimed in claim 8, wherein ~~characterized in that~~ said third particle fraction contains particles having an average aggregate or agglomerate size in the range from 1 to 25 µm.

Claim 11 (Currently Amended): [[A]] The membrane as ~~per at least one of claims 8 to 10~~ claimed in claim 8, wherein ~~characterized in that~~ said second fraction comprises particles having an average primary particle size in the range from 30 nm to 60 nm and said third fraction comprises particles having an average particle size in the range from 1 to 4 µm and said first fraction comprises from 10 to 20 parts by mass of said ceramic coating, said second fraction comprises from 10 to 30 parts by mass of said ceramic coating and said third fraction comprises from 40 to 70 parts by mass of said ceramic coating.

Claim 12 (Currently Amended): [[A]] The membrane as ~~per at least one of claims 8 to 11~~ claimed in claim 8, wherein ~~characterized in that~~ said particles of said third fraction are zirconium oxide or preferably silicon oxide particles and said particles of said second fraction are aluminum oxide particles and said first ceramic fraction is formed from silicon oxide.

Claim 13 (Currently Amended): [[A]] The membrane as ~~per at least one of claims 1 to 12, characterized in that~~ [[it]] claimed in claim 1, wherein the membrane is bendable down to a radius of 5 mm without defects arising as a result.

Claim 14 (Currently Amended): A process for producing a membrane, ~~which process comprises~~ comprising providing a polymeric nonwoven with a ceramic coating in and on said nonwoven by a suspension being applied onto and into said polymeric nonwoven and being solidified on and in said nonwoven by heating one or more times, said suspension comprising a sol and at least one fraction of oxidic particles selected from the oxides of the elements Al, Zr, Ti and/or Si and said suspension having added to it prior to application a mixture of at least two different adhesion promoters which are each based on an alkylalkoxysilane of the general formula [[**I**]] I

$$R_x\text{-}Si(OR)_{4-x} \qquad (I)$$

where x = 1 or 2 and R = organic radical, the R radicals being the same or different,

said adhesion promoters being selected so that both the adhesion promoters comprise alkyl radicals which at least each comprises a reactive group as a substituent, said reactive group on said alkyl radical of one adhesion promoter reacting with said reactive group of the other adhesion promoter during the one or more heating steps to form a covalent bond, or one or more adhesion promoters as per the formula [[**I**]] I, which have reactive groups which are capable of reacting under the action of UV radiation to form a covalent bond, the addition of an adhesion promoter which reacts under the action of UV radiation being followed by one or more treatments with UV radiation after said suspension has been applied to said polymeric nonwoven.

Claim 15 (Currently Amended): [[A]] The process according to claim 14, wherein the fibers of said polymeric nonwoven used are at least one selected from the group consisting of polyester, polyethylene, polypropylene ~~and/or~~ and polyamide.

Claim 16 (Currently Amended): [[A]] The process according to claim 14 ~~or 15~~, wherein said suspension comprises at least one sol of a compound of the elements Al, Si, Ti or Zr and is prepared by suspending said fraction of oxidic particles in at least one of these sols.

Claim 17 (Currently Amended): [[A]] The process according to ~~at least one of claims 14 to 16~~ claim 14, wherein said suspension comprises a polymeric sol of a compound of said silicon.

Claim 18 (Currently Amended): [[A]] The process according to ~~at least one of claims 14 to 17~~ claim 14, wherein said sols are obtained by hydrolyzing a precursor compound of the elements Al, Zr, Ti or Si with water or an acid or a combination thereof.

Claim 19 (Currently Amended): [[A]] The process according to ~~at least one of claims 14 to 18~~ claim 14, wherein the mass fraction of the suspended particle fractions is from 1.5 to 150 times the employed first fraction from said sol.

Claim 20 (Currently Amended): [[A]] The process according to ~~at least one of claims 14 to 19~~ claim 14, wherein 3-aminopropyltriethoxysilane (AMEO) and 3-glycidyloxytrimethoxysilane (GLYMO) are used as adhesion promoters capable of forming a covalent bond on heating.

Claim 21 (Currently Amended): [[A]] The process according to ~~at least one of claims 14 to 19~~ claim 14, wherein methacryloyloxypropyltrimethoxysilane (MEMO) is used as an adhesion promoter capable of forming a covalent bond under the action of UV radiation.

Claim 22 (Currently Amended): [[A]] The process according to claim 21, wherein the treatment with UV radiation is effected before or after said at least single heating.

Claim 23 (Currently Amended): [[A]] The process according to ~~at least one of claims 14 to 22~~ claim 14, wherein said suspension present on and in said polymeric nonwoven is solidified by heating to a temperature in the range from 50 to 350°C.

Claim 24 (Currently Amended): [[A]] The process according to claim 23, wherein on a polymeric nonwoven comprising polyester fibers said suspension is heated at a temperature in the range from 200 to 220°C for from 0.5 to 10 minutes.

Claim 25 (Currently Amended): [[A]] The process according to claim 23, wherein on a polymeric nonwoven comprising polyamide fibers said suspension is heated at a temperature in the range from 130 to 180°C for from 0.5 to 10 minutes.

Claim 26 (Currently Amended): [[A]] The process according to ~~any one of claims 14 to 25~~ claim 14, wherein said suspension comprises at least one sol and at least two fractions of oxidic particles selected from the oxides of the elements Al, Zr, Ti and/or Si and at least one fraction has an average primary particle size in the range from 10 nm to 199 nm and

comprises from 5 to 50 parts by mass of said suspension and at least one fraction comprises primary particles having an average particle size in the range from 200 nm to 5 μm and comprises from 30 to 94 parts by mass of said suspension.

Claim 27 (Canceled).

Claim 28 (Currently Amended): A lithium battery comprising a membrane as ~~per at least one of claims 1 to 13~~ claimed in claim 1 as a separator.

Claim 29 (Currently Amended): ~~Filtration~~ A filtration apparatus comprising a membrane as ~~per at least one of claims 1 to 13~~ claimed in claim 1.

Claim 30 (New): A method for filtration comprising utilizing the membrane as claimed in claim 1 as a filtration membrane.

Claim 31 (New): A method for separating electrical components comprising utilizing the membrane as claimed in claim 1 as an electrical separator wherein the membrane does not contain titanium compounds.